

**Listing of Claims:**

This listing of claims reflects all claim amendments and replaces all prior versions, and listings, of claims in the application. Material to be inserted is in **bold and underline**, and material to be deleted is in ~~strikeout~~ or (if the deletion is of five or fewer consecutive characters or would be difficult to see) in double brackets [[ ]].

1-7. (cancelled)

8. (Currently amended)      ~~The method of claim 7,~~ **A method of surveilling a subject, the subject including a person and any discernable objects with the person, the method comprising:**

**transmitting toward the subject in a subject position, electromagnetic radiation in a frequency range of about 100 MHz to about 2 THz, from positions spaced from the subject position;**

**receiving from the subject electromagnetic radiation emitted from the subject in response to the transmitted electromagnetic radiation;**

**producing an image signal representative of the received radiation;**

**producing from the image signal, image data corresponding to a first image of at least a portion of the subject having picture elements with different levels of intensity;**

determining whether the image data corresponding to the first image includes characteristics corresponding to an object on the person , including determining a correlation of the levels of intensity of at least one group of picture elements with the levels of intensity of a corresponding reference group of picture elements, including identifying at least a portion of the image data corresponding to which there is at least a threshold correlation of the levels of intensity of the picture elements in the at least one group of picture elements with the levels of intensity of the picture elements in the reference group of picture elements, including determining a correlation value of a given picture element that is derived from the intensity levels of a group of associated picture elements arranged relative to the given picture element, including in which ~~determining the correlation value of the given picture element derived from the intensity levels of an associated group of picture elements includes~~ modifying the original intensity level of each picture element of the group of associated picture elements, by an amount related to the position of the picture element in the group relative to the given element, and combining the modified intensity levels; and

when the image data corresponding to the first image is determined to include characteristics corresponding to an object, determining the location in the first image corresponding to image data including characteristics corresponding to an object.

9. (Original) The method of claim 8, in which modifying the original intensity level includes associating a factor with each picture-element in the group of picture-elements, with at least two of the factors being different, and multiplying the original intensity level of each picture element in the group by the factor associated with the picture element.

10. (Original) The method of claim 9, in which associating a factor includes associating a factor with each picture element in a group of adjacent picture-element positions including a center picture-element position, with the factor associated with the center picture-element position having a value greater than the value of the other factors.

11. (Original) The method of claim 10, in which associating a factor includes associating a factor with each picture element in a group of adjacent picture-element positions forming at least one row of picture-element positions, with the factors of the picture-element positions in the at least one row including at least one positive value and at least one negative value.

12. (Original) The method of claim 11, in which associating a factor includes associating a factor with each picture element in a group of adjacent picture-element positions forming a grid of columns and rows of picture-element positions, with the factors of the picture-element positions in each row and column alternating between positive and negative values.

13. (Currently amended) ~~The method of claim 2, further comprising:~~ A method of surveilling a subject, the subject including a person and any discernable objects with the person, the method comprising:

transmitting toward the subject in a subject position, electromagnetic radiation in a frequency range of about 100 MHz to about 2 THz, from positions spaced from the subject position;

receiving from the subject electromagnetic radiation emitted from the subject in response to the transmitted electromagnetic radiation;

producing an image signal representative of the received radiation;

producing, from the image signal, image data corresponding to a first image of at least a portion of the subject;

determining whether the image data corresponding to the first image includes characteristics corresponding to an object on the person; and

when the image data corresponding to the first image is determined to include characteristics corresponding to an object, determining the location in the first image corresponding to image data including characteristics corresponding to an object; producing, from the image signal, image data corresponding to a second image of at least a portion of the first image including the location corresponding to image data including characteristics corresponding to the object, and displaying a third image representative of at least a portion of the

subject corresponding to the location of the object, the third image including at least a portion of the second image and a fourth image, the fourth image including at least a

portion of the subject adjacent to the portion of the subject corresponding to the location of the object and having a lower resolution than the first image.

14. (Original) The method of claim 13, further comprising displaying third images for different orientations of the subject.

15. (Original) The method of claim 14, in which displaying the third images includes displaying the third images in time sequence.

16. (Original) The method of claim 15, in which displaying the third images includes displaying the third images in a manner visually perceived as a rotating image.

17. (Original) The method of claim 14, further comprising selecting the number of third images to be displayed.

18–23. (Cancelled)

24. (Currently amended) ~~The method of claim 23, in which~~ **A method comprising:**  
**interrogating a subject, including a person and any objects carried by the**  
**person, with electromagnetic radiation in a range of about 100 MHz to about 2**  
**THz;**

generating, from the interrogating, first image data having picture elements with different levels of intensity and representative of a first image of at least a portion of the subject;

identifying at least a first portion of the first image data having characteristics corresponding to characteristics of an object carried by the person, including determining a correlation of the levels of intensity of at least one group of picture elements with the levels of intensity of a corresponding reference group of picture elements, including identifying at least a portion of the first image data corresponding to which there is at least a threshold correlation of the levels of intensity of the picture elements in the at least one group of picture elements with the levels of intensity of the reference group of picture elements, including determining a correlation value for a given picture element that is derived from the intensity levels of a group of associated picture elements arranged relative to the given picture element, including ~~determining the correlation value for the given picture element derived from the intensity levels of an associated group of picture elements~~ includes modifying the original intensity level of each picture element of the **one** group of associated picture elements, by an amount related to the position of the picture element in the first group relative to the given element, and combining the modified intensity levels; and

displaying a second image representative of the first portion of the first image data.

25. (Currently amended) The method of claim 24, in which modifying the original intensity level includes associating a factor with each picture-element in the one group of picture-elements, with at least two of the factors being different, and multiplying the original intensity level of each picture element in the one group by the factor associated with the picture element.

26. (Original) The method of claim 25, in which associating a factor includes associating a factor with each picture element in a group of adjacent picture-element positions including a center picture-element position, with the factor associated with the center picture-element position having a value greater than the value of the other factors.

27. (Original) The method of claim 25, in which associating a factor includes associating a factor with each picture element in a group of adjacent picture-element positions forming at least one row of picture-element positions, with the factors of the picture-element position in the at least one row including at least one positive value and at least one negative value.

28. (Currently amended) The method of claim 25, in which associating a factor includes associating a factor with each picture element in [[a]] the one group of adjacent picture-element positions forming a grid of columns and rows of picture-element positions, with the factors of the picture-element positions in each row and column alternating between positive and negative values.

29. (Currently amended) ~~The method of claim 19,~~A method comprising:

interrogating a subject, including a person and any objects carried by the person, with electromagnetic radiation in a range of about 100 MHz to about 2 THz;

generating, from the interrogating, first image data representative of a first image of at least a portion of the subject;

identifying at least a first portion of the first image data having characteristics corresponding to characteristics of an object carried by the person;

displaying a second image representative of the first portion of the first image data, including ~~wherein displaying a second image includes displaying a third image including the second image and a fourth image, the fourth image including at least a portion of the subject adjacent to the portion of the subject corresponding to the location of the object and having a lower resolution than the first image.~~

30. (Original) The method of claim 29, further comprising displaying third images for different orientations of the subject.

31. (Original) The method of claim 30, in which displaying the third images includes displaying the third images in time sequence.



32. (Previously presented) The method of claim 31, in which displaying the third images includes displaying the third images in a manner visually perceived as a rotating image.

33. (Previously presented) The method of claim 30, further comprising selecting the number of third images to be displayed.

34. (Currently amended) An imaging system comprising:  
an antenna assembly including at least a first antenna apparatus, each antenna apparatus configured to transmit toward and receive from a subject, including a person and any discernable objects with the person, in a subject position, electromagnetic radiation in a frequency range of about 100 MHz to about 2 THz, from positions spaced from the subject position, the antenna assembly producing an image signal representative of the received radiation; [[and]]

a controller adapted to produce from at least a first portion of the image signal first image data corresponding to a first image of at least a portion of the subject, and to identify at least a first portion of the first image data having characteristics corresponding to characteristics of an object carried by the person; and

a display device coupled to the controller, the controller being further adapted to display, on the display, a second image including at least the portion of the first image and a third image, the third image including at least a portion of the subject adjacent to the portion of the first image and having a lower resolution than the first image.

35. (Original) The system of claim 34, in which the controller is further adapted to generate first image data having picture elements with different levels of intensity, and to determine a correlation of the levels of intensity of at least one group of picture elements with the levels of intensity of a corresponding reference group of picture elements.

36. (Currently amended) The system of claim 35 [[34]], in which the controller is further adapted to identify at least a portion of the first image data corresponding to which there is at least a threshold correlation of the levels of intensity of the picture elements in the at least one group of picture elements with the levels of intensity of the reference group of picture elements.

37. (Cancelled)

38. (Currently amended) The system of claim 34 [[37]], in which the controller is further adapted to display a third image for each of a plurality of different orientations of the subject.

39. (Original) The system of claim 38, in which the controller is further adapted to display the third images in time sequence.

40. (Original) The system of claim 39, in which the controller is further adapted to display the third images in a manner visually perceived as a rotating image.

41. (Original) The system of claim 38, in which the controller is further adapted allow a user to select the number of third images to be displayed.

42-45. (Cancelled)

46. (Previously presented) The method of claim 28, wherein associating a factor with each picture element includes associating a factor with each picture element in a group of adjacent picture elements forming a grid of at least five adjacent columns and five adjacent rows of picture elements containing the given picture element.

47. (Previously presented) The method of claim 29, wherein displaying the third image includes displaying one or more second images and the fourth image, with the fourth image including the entire portion of the subject not included in the one or more second images.

48. (Previously presented) The method of claim 29, wherein identifying at least a first portion of the first image data having characteristics corresponding to characteristics of an object includes modifying the first image data to produce fourth image data representative of the fourth image, and identifying from the fourth image data one or more portions having characteristics corresponding to characteristics of an object.

49. (Currently amended) The system of claim 34 [[37]], wherein the controller is adapted to identify at least a first portion of the first image data having characteristics corresponding to characteristics of an object by modifying the entire portion of the first image data corresponding to the person in a manner reducing the resolution of the first image data, and displaying the modified image data as the third image.

50. (Previously presented) The system of claim 49, wherein the controller is adapted to identify at least a first portion of the first image data having characteristics corresponding to characteristics of an object by identifying characteristics corresponding to characteristics of an object in at least the first portion of the modified image data.

51. (Currently amended) The system of claim 34 [[37]], wherein the controller is adapted to display the third image of the entire portion of the first image data corresponding to the person, with the portion of the third image corresponding to the first portion of the first image data displayed as the portion of the first image.